COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY AND A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY TO CONSTRUCT FOUR 75 MEGAWATT COMBUSTION TURBINE PEAKING UNITS AND ASSOCIATED FACILITIES SCHEDULED FOR COMPLETION IN 1994 AND 1995, RESPECTIVELY, TO BE LOCATED AT THE COMPANY'S E. W. BROWN GENERATING STATION IN MERCER COUNTY, KENTUCKY	)	CASE NO. 91-115

O R D E R

Kentucky Utilities Company ("KU") filed its application requesting a Certificate of Public Convenience and Necessity and a Certificate of Environmental Compatibility for authority to construct 300 megawatts of peaking capacity, in the form of combustion turbines ("CTs"), at its E. W. Brown generating station ("Brown") in Mercer County, Kentucky. The Attorney General's Utility and Rate Intervention Division ("AG"), which intervened in this proceeding, opposed construction of the CTs at Brown, citing the absence of a natural gas pipeline at the proposed site. The AG argued that a better alternative would be the site owned by East Kentucky Power Cooperative, Inc. ("East Kentucky") in Trapp, Kentucky, where natural gas was already available. After a public hearing on KU's request, the Commission entered an Interim Order in this matter on December 6, 1991.

In its Interim Order, the Commission found that the record in this proceeding clearly demonstrated KU's need for 300 megawatts of peaking capacity but was inconclusive on the proposal to construct CTs at Brown. KU was required to supplement the record by expanding its earlier solicitation of potential sources of peaking capacity to include not only the eight utilities with which it is interconnected but also all the utilities with which those eight are interconnected. The results of this solicitation would determine whether any capacity purchase alternatives might cost-effectively permit a delay in the construction of the CTs. KU was also required to perform a joint analysis with East Kentucky of the costs KU would incur under a cost-sharing arrangement with East Kentucky for the joint development of the Trapp site.

KU filed its supplemental information on January 6, 1992. The information filed by KU shows that: (1) constructing the CTs as proposed without purchasing capacity from other sources is KU's least cost alternative for meeting its capacity needs, and (2) KU's cost to locate 300 megawatts of CT capacity at the Trapp site would exceed its cost for locating the same 300 megawatts at the Brown site by $10.7 million. The analysis of purchase alternatives involved a cost comparison of substantive proposals submitted by eight utilities versus KU's construction of the proposed CTs. KU's cost analysis of the construction alternative

reflected the bid proposals it had previously filed with the Commission.[1]

On January 13, 1992, the AG filed comments on KU's supplemental information as permitted by the Interim Order of December 6, 1991. Therein, the AG opines that while neither the Brown site nor Trapp site is ideal, the supplemental information indicates that Brown is the better of the two. The AG also opines that the supplemental information shows the short-term purchase of capacity, which could delay construction of the CTs, offers no cost advantages over proceeding with the construction alternative proposed by KU.

Two issues are raised by the AG concerning construction at the Brown site: (1) accelerating the construction timetable for the gas pipeline so that ratepayers receive the benefit of the fuel savings derived from burning a mix of gas and oil rather than oil only during the first two years of operation; and (2) prohibiting KU's current expenditures for site preparation, water treatment, or substation capacity needed to support a future series of CTs presently planned for the late 1990s. With these two conditions, the AG recommends that KU be allowed to proceed with the construction of 300 megawatts of CTs at the Brown site.

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[1] Summary of CT Bids and Estimate of Installed Capital Cost at Brown Site, filed December 2, 1991.

ANALYSIS

The supplemental information shows constructing CTs at the Brown site to be less costly than constructing at the Trapp site. The information also shows construction in the time frame proposed by KU to be less costly than short-term capacity purchases that might delay the need for a portion of the proposed CT capacity. The supplemental information is generally supportive of KU's request for authority to construct CTs at the Brown site with completion scheduled for the 1994-1995 time period.

However, the supplemental information refutes KU's original assumptions as to the availability and cost of short-term capacity purchases. KU received eight substantive proposals -- four of which resulted in total costs within 2 percent of KU's cost to construct CTs in the 1994-1995 time frame. Had the actual construction bids for the CTs not been approximately 25 percent below KU's original cost estimates, these purchase options would be less costly than the proposed construction. Had KU received and analyzed these or similar proposals in comparison to its original cost estimates prior to making its application, the nature and magnitude of its request might have been measurably different.

These suppositions will not affect the Commission's decision in this case. However, they illustrate that potential economical purchases were overlooked by KU through its initial solicitation. Given the results of KU's supplemental solicitation, it is obvious that a widespread distribution of such a solicitation should have been performed initially by KU and should be standard operating

procedure in the future. Ideally, future solicitations should be even more widely distributed than the Commission required in this instance and need not be limited to utility producers of electricity.

As the AG commented, analysis of KU's supplemental information indicates that with a minimum of 200 megawatts installed in 1994 the fuel savings attainable from burning gas and oil should offset the annual fixed charges of $1.37 million associated with a gas pipeline by more than $1 million in 1994.[2] KU's supplemental information was based on an 80/20 gas and oil fuel mix. KU's earlier analysis reflected only 75 megawatts installed in 1994 and a 55/45 gas and oil mix. The results of that analysis indicated the fuel savings obtained from burning a gas and oil mix, as opposed to burning oil only, would not exceed the pipeline's fixed charges until 1996.

KU's supplemental data underscores the degree to which the question of potential fuel savings is dependent upon estimates for generation levels, fuel mix, and fuel prices. Analysis of these latest estimates indicates KU should proceed to construct the pipeline to coincide with completion of the first CTs scheduled for 1994. Altering the fuel mix to a 55/45 gas and oil mix would reduce the fuel cost savings, versus the pipeline's fixed charges, by approximately one-half for 1994, but this would not change the

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[2] Annual fixed charges of $1.37 million based on projected pipeline cost of $8 million (1991 dollars), 6 percent annual escalation rate and 14.33 percent levelized fixed charge rate.

conclusion that the pipeline should be completed by 1994. Future changes in fuel prices and generation levels might show that completion of a pipeline should be delayed; however, given the two-year lead time previously indicated by KU for permitting and construction,[3] a decision to complete the pipeline by 1994 must be made now. The data provided in the supplemental filing indicates that KU should proceed with plans to construct the pipeline with completion scheduled for 1994. KU should make its request with the Commission for a Certificate of Convenience and Necessity to construct the pipeline as soon as possible to avoid any delay in completion of the pipeline.

The second issue raised by the AG concerned those components of KU's projected site development costs that were based on adding 800 megawatts of capacity rather than the 300 megawatts requested in the application. The AG opined that KU should limit its expenditures for this project to only those levels required for the capacity additions requested. The AG argued that, with the potential for the delay or cancellation of future additions due to implementation of demand side management ("DSM") programs, customers should not be carrying the costs of site preparation many years before the capacity is needed. The Commission shares the AG's concerns that the incremental site development costs for future capacity additions not be borne by customers for an unreasonable length of time; however, we are not inclined in this

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[3] Rebuttal Testimony of Gary L. Hawley, filed September 24, 1991, pages 3-5.

proceeding to direct KU to forgo the potential economies of scale it may realize by incurring some development costs for 800 megawatts of capacity rather than 300 megawatts. KU may proceed with its planned site development work if, after consideration of DSM and other least-cost planning options, it believes the site will be needed for future capacity additions. The matter of rate recovery of any site development costs associated with future capacity additions will be addressed at such time when the Commission reviews the reasonableness of the decision to incur those costs. For those development costs questioned by the AG -- site grading, water pretreatment plant, and a 138 KV substation -- and any similar development costs, KU should determine and document the incremental costs beyond those needed for the 300 megawatts requested. KU should file annual reports on the level of such costs with the first report to be filed by January 31, 1993. KU should continue to file such reports until directed otherwise.

SUMMARY

After consideration of the evidence of record and being otherwise sufficiently advised, the Commission finds that:

1. KU will require 300 megawatts of peaking capacity in the 1994-1995 time frame and constructing CTs at the Brown site without purchasing additional power from other sources is the least cost alternative available to KU to meet this requirement.

2. KU's proposed construction is compatible with the requirements and regulations of the Kentucky Natural Resources and Environmental Protection Cabinet which has recommended that a

Certificate of Environmental Compatibility be issued to KU for this project.

3. It appears economically feasible for KU to construct a natural gas pipeline to the Brown site so that natural gas may be used to fuel the CTs. Construction of the pipeline should be completed to coincide with the initial operation of the CTs in 1994.

4. KU should make a determination of the incremental cost of all site development work related to any potential future capacity that would be in addition to the cost of site development for the 300 megawatts of capacity addressed herein and periodically report such costs to the Commission.

IT IS THEREFORE ORDERED that:

1. KU be and it is hereby granted a Certificate of Public Convenience and Necessity and a Certificate of Environmental Compatibility to proceed with the construction of 300 megawatts of peaking capacity in the form of combustion turbines at its Brown generating station as more specifically described in the application and record.

2. KU shall file, by May 1, 1992, an application for a Certificate of Public Convenience and Necessity to construct a natural gas pipeline to serve the Brown site.

3. KU shall determine the incremental cost of all site development work on this project in excess of the work required to develop the site for the 300 megawatts of capacity authorized herein and file annual reports of such costs with the Commission with the first report to be filed by January 31, 1993.

Done at Frankfort, Kentucky, this 31st day of January, 1992.

PUBLIC SERVICE COMMISSION

Chairman

Vice Chairman

Commissioner

ATTEST:

Executive Director